

**ICF international / Laboratory Data Consultants**

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MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
 Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Manager (TOM)
 Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager
 Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041
 Technical Direction Form No.: 00105132

DATE: April 18, 2008

SUBJECT: Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC QB02
CERCLIS ID NO.:	CAD042245001
Case No.:	37203
SDG No.:	Y3WK7
Laboratory:	Mitkem Laboratories (MITKEM)
Analysis:	1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by Trace Volatiles Selective Ion Monitoring (SIM)
Samples:	20 Ground Water Samples (see Case Summary)
Collection Date:	February 28 and 29, 2008 and March 3, 2008
Reviewer:	Santiago Lee, ESAT/Laboratory Data Consultants (LDC)

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

cc: Jennie Han-Liu, CLP PO USEPA Region 1
 Steve Remaley, CLP PO USEPA Region 9

CLP PO: ☒ Attention ☐ Action

SAMPLING ISSUES: ☐ Yes ☒ No

Data Validation Report - Tier 3

Case No.: 37203
SDG No.: Y3WK7
Site: Omega Chem OU2
Laboratory: Mitkem Laboratories
Reviewer: Santiago Lee, ESAT/LDC
Date: April 18, 2008

I. CASE SUMMARY

Sample Information

Samples: Y3WK7 through Y3WM6
Concentration and Matrix: Low/Medium Concentration Water
Analysis: 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane
by Trace Volatiles SIM
SOW: SOM01.2
Collection Date: February 28 and 29, 2008 and March 3, 2008
Sample Receipt Date: February 29, 2008 and March 3 and 4, 2008
Extraction Date: Not Applicable
Analysis Date: March 4, 6, and 7, 2008

Field QC

Field Blanks (FB): Y3WM6
Equipment Blanks (EB): Not Provided
Trip Blanks (TB): Y3WL7
Background Samples (BG): Not Provided
Field Duplicates (D1): Y3WL2 and Y3WL3
Field Duplicates (D2): Y3WM4 and Y3WM5

Laboratory QC

Method Blanks & Associated Samples:
VBLKB2: Y3WK7 through Y3WL7
VBLKE2: Y3WL8 through Y3WM6
VBLKG2: storage blank VHBLKG2

Tables

1A: Analytical Results with Qualifications
1B: Data Qualifier Definitions for Organic Data Review
2: Calibration Summary

CLP PO Action

None.

CLP PO Attention

Results for 1,2-dibromo-3-chloropropane are qualified as estimated (J) due to low relative response factors (RRFs) in initial calibration and continuing calibration verifications (CCVs) (see Comment A).

Sampling Issues

None.

Additional Comments

Matrix spike/matrix spike duplicate (MS/MSD) analysis was not performed by the laboratory. Consequently, matrix-specific accuracy and precision could not be evaluated.

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services Volatile and Semivolatile Data Packages*;
- USEPA Contract Laboratory Program Statement of Work for Organics Analysis, *Multi-Media, Multi-Concentration*, SOM01.1, May 2005;
- *Modifications Updating SOM01.1 to SOM01.2*, Amended April 11, 2007; and
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, July 2007.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	<u>Parameter</u>	<u>Acceptable</u>	<u>Comment</u>
1.	Holding Time/Preservation	Yes	
2.	GC/MS Tune/GC Performance	Yes	
3.	Initial Calibration	No	A
4.	Continuing Calibration Verification	No	A
5.	Laboratory Blanks	Yes	
6.	Field Blanks	Yes	
7.	Deuterated Monitoring Compounds	Yes	
8.	Matrix Spike/Matrix Spike Duplicate	N/A	
9.	Laboratory Control Samples/Duplicate	N/A	
10.	Internal Standards	Yes	
11.	Compound Identification	Yes	
12.	Compound Quantitation	Yes	
13.	System Performance	Yes	
14.	Field Duplicate Sample Analysis	Yes	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. Results for the following analyte are qualified as estimated due to low RRFs in initial calibration and CCVs and are flagged "J" in Table 1A.

- 1,2-Dibromo-3-chloropropane in all samples, all method blanks, and storage blank VHBLKG2

An average RRF of 0.049 was reported for 1,2-dibromo-3-chloropropane in the initial calibration. RRFs were below the 0.05 validation criterion for 1,2-dibromo-3-chloropropane in CCVs (see Table 2). Since qualified results are nondetected, false negatives may exist.

The RRF evaluates instrument sensitivity and is used in the quantitation of target analytes.

ANALYTICAL RESULTS

Page 1 of 2

Case No. : 37203 SDG No. : Y3WK7

Site : OMEGA CHEM OU2

Lab : MITKEM LABORATORIES

Reviewer : Santiago Lee, ESAT/LDC

Date : 04/18/08

Table 1A

QUALIFIED DATA
Concentration in ug/LAnalysis Type : Trace Level Water Samples
for Volatiles SIM

Station Location :	41	42	43	44	45	46
Sample ID :	Y3WK7	Y3WK8	Y3WK9	Y3WL0	Y3WL1	Y3WL2 D1
Collection Date :	2/28/2008	2/29/2008	2/29/2008	2/29/2008	2/29/2008	2/29/2008
Dilution Factor :	1.0	1.0	1.0	1.0	1.0	1.0
Volatiles SIM	Result	Val	Com	Result	Val	Com
1,2-Dibromoethane	0.050U			0.050U		
1,2-Dibromo-3-chloropropane	0.050U	J	A	0.050U	J	A

Station Location :	47	48	49	50	51	52
Sample ID :	Y3WL3 D1	Y3WL4	Y3WL5	Y3WL6	Y3WL7 TB	Y3WL8
Collection Date :	2/29/2008	2/29/2008	2/29/2008	2/29/2008	2/29/2008	3/3/2008
Dilution Factor :	1.0	1.0	1.0	1.0	1.0	1.0
Volatiles SIM	Result	Val	Com	Result	Val	Com
1,2-Dibromoethane	0.050U			0.050U		
1,2-Dibromo-3-chloropropane	0.050U	J	A	0.050U	J	A

Station Location :	53	54	55	56	57	58
Sample ID :	Y3WL9	Y3WM0	Y3WM1	Y3WM2	Y3WM3	Y3WM4 D2
Collection Date :	3/3/2008	3/3/2008	3/3/2008	3/3/2008	3/3/2008	3/3/2008
Dilution Factor :	1.0	1.0	1.0	1.0	1.0	1.0
Volatiles SIM	Result	Val	Com	Result	Val	Com
1,2-Dibromoethane	0.050U			0.050U		
1,2-Dibromo-3-chloropropane	0.050U	J	A	0.050U	J	A

Val - Validity. Refer to Data Qualifiers in Table 1B.

Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.

CRQL - Contract Required Quantitation Limit

N/A - Not Applicable

NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs

FB - Field Blank, EB - Equipment Blank,

TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS

Page 2 of 2

Case No. : 37203 SDG No. : Y3WK7

Site : OMEGA CHEM OU2

Lab : MITKEM LABORATORIES

Reviewer : Santiago Lee, ESAT/LDC

Date : 04/18/08

Table 1A

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples
 for Volatiles SIM

Station Location :	59			60			Method Blank			Method Blank			Method Blank			Storage Blank		
Sample ID :	Y3WM5 D2			Y3WM6 FB			VBLKB2			VBLKE2			VBLKG2			VHBLKG2		
Collection Date :	3/3/2008			3/3/2008														
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Volatiles SIM	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
1,2-Dibromoethane	0.050U			0.050U			0.050U			0.050U			0.050U			0.050U		
1,2-Dibromo-3-chloropropane	0.050U	J	A	0.050U	J	A	0.050U	J	A	0.050U	J	A	0.050U	J	A	0.050U	J	A

Station Location :																		
Sample ID :	CRQL																	
Collection Date :																		
Dilution Factor :																		
Volatiles SIM	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
1,2-Dibromoethane	0.050																	
1,2-Dibromo-3-chloropropane	0.050																	

Val - Validity. Refer to Data Qualifiers in Table 1B.

Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.

CRQL - Contract Required Quantitation Limit

N/A - Not Applicable

NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs

FB - Field Blank, EB - Equipment Blank,

TB - Trip Blank, BG - Background Sample

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," July 2007.

- U The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Table 2
Calibration Summary

Case No.: 37203
 SDG No.: Y3WK7
 Site: Omega Chem OU2
 Laboratory: Mitkem Laboratories
 Reviewer: Santiago Lee, ESAT/LDC
 Date: April 18, 2008

RELATIVE RESPONSE FACTORS (RRF)

	<u>RRF</u>	<u>RRF</u>	<u>RRF</u>	<u>RRF</u>
Analysis date:	03/04/08	03/06/08	03/06/08	03/07/08
Analysis time:	20:11	08:40	18:07	08:52
GC/MS I.D.:	V2	V2	V2	V2
<u>Analyte</u>	<u>Cont.</u>	<u>Cont.</u>	<u>Cont.</u>	<u>Cont.</u>
1,2-Dibromo-3-chloropropane	0.048	0.036	0.046	0.046